

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF IOWA
(Central Division)

LARRY ZUBROD, Individually and
as Administrator for the ESTATE OF
MICHAEL ZUBROD, and CHERY
ZUBROD, Individually and as
Administrator for the ESTATE OF
MICHAEL ZUBROD

Plaintiffs,

vs.

SHAYNE HOCK, ISAAC SHORT, and
JOHN SMITH, in each man's
individual capacity as a Law
Enforcement Officer for the Worth
County Sherriff's Office; SHERIFF
JAY LANGENBAU, in his individual
Capacity, and WORTH COUNTY,
IOWA.

Defendants.

Case No. 6:15-cv-02065-LRR

PRELIMINARY ANALYSIS OF
WRONGFUL DEATH DAMAGES
AS OF APRIL 26, 2016



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This report contains statements of opinions and the bases and reasons therefore; the data or other information that were considered in forming the opinions; any exhibits known at this time to be used as a summary of our support for the opinions; our qualifications, including a list of all publications we have authored within the preceding ten years and a listing of any other cases in which we have testified as an expert at trial or by deposition within the preceding four years; and our compensation for this study and testimony.

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- I. **Introduction** – This report summarizes our preliminary analysis of the Estate of Michael Zubrod's wrongful death damages. Our analysis is based upon a review of the complaint, professional background, education and work experience. A copy of Brian Crotty's curriculum vitae is attached as Attachment 1. A detailed list of data and other information considered at this time in developing our opinions is included as Attachment 2.

Our analysis has been performed in accordance with the American Institute of Certified Public Accountants Code of Professional Conduct and Statement on Standards for Consulting Services No. 1 – Consulting Service Definitions and Standards.

Our opinions and analysis are subject to change. As additional information is made available or is brought to our attention, we will adjust our analysis accordingly. Also, in preparing for trial we may prepare exhibits based upon information included in this report or additional information that becomes available, hereafter.

- II. **Purpose of Analysis** - At the request of attorneys Brandon Brown and David Skilton, we have been asked to analyze and provide an opinion on the wrongful death damages incurred by the Estate of Michael Zubrod as a result of Michael Zubrod's death.
- III. **Opinion** - Our present opinion of the amount of "damages" adequate to compensate for the wrongful death of Michael Zubrod, is approximately **\$1,234,694** as of April 26, 2016.

Basis for Opinion

Wrongful death damage, specific to the Estate of Michael Zubrod, is the amount of savings that would have been accumulated over the course of his life, but for the injury, which caused his death. Quantitatively, this is equivalent to an amount invested at the present time, at some interest rate, which would equal the cumulative future savings (gross earnings less Michael Zubrod's personal consumption) and saving/retirement specific fringe benefits from career productivity.

Estimating this future loss requires analysis of various factors related to Michael Zubrod's life with statistical averages from the general population. The following outline details these factors.

- I. Life Expectancy

- How long would Michael Zubrod have lived?*

- II. Work Life Expectancy

- For how many years would Michael Zubrod have been employed?*

- III. Future Earnings and Fringe Benefits

- During employment, what would Michael Zubrod have made in salary and benefits?*

How much would the salary or benefits have increased on an annual basis?

IV. Future Consumption/Savings

How much would Michael Zubrod have consumed and, correspondingly, saved?

V. Discount Rate

What is the appropriate discount rate?

VI. Inflation

What impact will inflation have on the conclusion?

Analysis

Calculating the present value of lost future savings from future earnings for the Estate of Michael Zubrod requires many estimates. At the time of his death he was earning \$14 per hour as a press operator for Mitas Tires North America, Inc. The majority of other estimates came from governmental publications including statistics on various aspects of the longevity of life, career earnings, savings rates and projected growth rates. The following sections analyze these estimates in greater detail. A listing of sources is provided in Attachment 2.

Life Expectancy

Michael Zubrod was born on December 27, 1973 and died September 22, 2013, making him 39 years old at the time of his death. We have not reviewed any historical medical records for Michael Zubrod, but have assumed he was of average physical health at his death. However, the 2001 Commissioners Standard Ordinary Mortality Tables cited in the 2016 Code of Iowa estimated Mr. Zubrod's life expectancy at age 39 to be an additional 39.27 years, or approximately age 78 based upon the statistical average.

Work Life Expectancy

Typically, individuals do not work throughout their entire life resulting in a work life expectancy, which is less than life expectancy. Work life expectancy is influenced by death, disability, education, and the choice not to work due to family issues, unemployment and retirement.

We have assumed Michael Zubrod would have continued his employment at Mitas Tires North America, Inc. until his normal retirement age. In addition, Mr. Zubrod had historically worked in his spare time on the family farm. As a result, we have analyzed median or average compensation levels from national employment and wage data, to estimate reasonable levels of compensation growth beginning with his starting wage of \$14 per hour at Mitas Tires.

The U.S. Department of Labor, Bureau of Labor Statistics¹ computes work life expectancies for people of a given age and sex by race or education with consideration to the probabilities of life and participation in the work force. The probabilities of both being alive and being in the work force are combined into a joint probability, yielding estimates for work life expectancy:

- ♦ For a white male, a work life expectancy of at least 26.2 years at age 39.
- ♦ For a white male age 39 with a high school education, a work life expectancy of 28.1 years.
- ♦ For all males age 39, a work life expectancy of 21.3 years

An alternate model, offered in an article written in July 1983, by Brookshire and Cobb², utilizes more Department of Labor data as previously discussed, and is updated from data extracted from the Annual Demographic Survey (March Supplement) of the Current Population Survey for the years 1992-2001³. The model computes a series of joint probabilities, including the

probability of being alive (L), the probability of being employed (PE) and the probability of working (LPE). The model is called the LPE approach.

We have used the LPE approach to make another estimate of Michael Zubrod's work life expectancy and have detailed this estimate in Exhibit A. Performing this calculation for a white male, with a high school education, 39 years old yielded a work life expectancy of 22.2267 years.

Based on these sources, we have estimated Michael Zubrod's work life expectancy would be 67 at retirement. This is slightly higher than the simple average of the sources above but we believe this to be reasonable as people are generally working to an older age. This is consistent with assumptions utilized by The United States Social Security Administration for normal retirement age.

Future Earnings and Fringe Benefits

Estimating wrongful death damages involves analyzing the future lost earnings stream from which a decedent would have accumulated savings. This stream may be approximated as a series of after-tax payments, one for each year of Michael Zubrod's career.

Earnings

We have utilized \$14 per hour as the base year in earnings from 2013 based on his actual wage rate from Mitas Tires at his time of death. We have also calculated his average farm income based on the latest four-year simple average of actual w-2 farm income Mr. Zubrod received from the family farm.

Growth Rate in Compensation/Real Wage Increases

There are two components of historical wage increases excluding the impact of inflation: real wage increases and merit or productivity increases.

Real wage increases are wage increases on an annual basis in excess of inflation. The primary driver of wage increases over an extended period of time has not been real wage increases, rather, has been merit or productivity increases.

Historically wage increases have been driven by increased productivity on a macro level and on an individual level by merit or productivity increases. This is a result of an employee becoming increasingly valuable to an employer over a period of employment. As an individual's personal work experience increases, so do contributions to a company. These contributions come primarily in the form of increased productivity.

Estimating productivity increases for a specific person is subjective. In this case, it was difficult particularly as Michael Zubrod was a relatively new employee. We analyzed median compensation as of the latest Occupational Employment and Wage Estimates in Iowa for Machine Pressing at \$17.69 per hour in order to get Michael Zubrod's compensation closer to the median by the end of 2017, or approximately 5 years after his initial hire. We then analyzed the mean compensation level increases from Department of Labor⁸ statistics by age categories (see estimates in Exhibit B). The compounded annual was approximately 4.5 percent in the 10-year increment from age 45-54, as categorized by the Department of Labor's statistics. This was utilized as an estimate of real wage increases to be achieved by Michael Zubrod as a

result of his career progression. After age 54, we lowered the growth rate to 3 percent in order to be conservative.

We have chosen annual growth estimates based on the range calculated in Exhibit B and Iowa Occupational Employment and Wage Estimates. Due to the cyclical nature of farming and volatility in the farming industry we chose to keep Mr. Zubrod's additional farm income at zero growth over the long term in order to be conservative.

Fringe Benefits – Savings/Retirement

Lost future savings, also includes lost fringe benefits – savings/retirement provided by an employer, that accrue to an individual throughout a career. As Michael Zubrod had not entered the workplace, it was necessary to estimate these benefits.

We obtained the U.S. Chamber of Commerce's, Employee Benefits Study⁴ to analyze the fringe benefits – savings/retirement provided by an employer for all manufacturing jobs as a percentage of payroll. This estimate was an average of 5.1 percent of gross compensation utilized in Exhibit C, to estimate fringe benefits specific to savings/retirement provided by an employer to an employee on an annual basis.

Future Consumption/Savings

Michael Zubrod would have consumed a significant portion of his earnings to maintain a certain quality of life. The Estate of Michael Zubrod has a claim for that portion of Michael Zubrod's earnings that would have been accumulated as savings over the course of his life. Again, as he was planning on attending college in the future, there is no track record as to his savings habits.

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Based upon analysis of the data detailed in the "Patton-Nelson Consumption Tables"⁵, we determined that of Michael Zubrod's earnings, between 45.5 percent would have been consumed on an annual basis (See Exhibit C).

As discussed further below, we made the assumption that at the date of Michael Zubrod's death, his net worth was zero.

Discount Rate

Wrongful death damages are awarded in a lump-sum payment. An award would earn interest at some interest rate. This future interest income stream should be considered when estimating the magnitude of the award. The discount rate applicable in this analysis is that which would be earned on a risk-free investment, or as near a risk-free investment as is available. (Note: The 30-year U.S. Treasury Bond rates are often used as a proxy for the risk free rate in economic analyses.) The 30-year term is as consistent risk-free rate term as is available compared with the term of Michael Zubrod's work life expectancy.

As of September 20, 2013, the rate on 20-year Treasury Bonds was 3.77%⁶. The inflationary component of this risk free rate was 1.9% (see discussion below) resulting in a real rate of interest of 1.87% as of September 20, 2013.

Funeral Costs

Lost future savings also includes the lost money and interest paid for funeral costs, which would have accrued to an individual. We have not been provided detail of the total costs but have assumed these costs would be added to our final calculation. Therefore, we have not added the total funeral costs at this time to our total estimated damages detailed in Exhibit C.

Inflation

Inflation has an impact on many variables in this equation by eroding the purchasing power of estimated future earnings. As previously discussed wages are increased by merit or productivity gains, as well as by inflationary pressures.

Inflation is influenced by many factors. Investors search for a place to invest their money such that purchasing power does not decline and they are compensated for the risk of owning an investment over a period of time. An appropriate discount rate on a 30-year Government Treasury at 3.77% incorporates both an estimate of anticipated inflation and a desired real rate of return on an investment.

We have analyzed the difference between the Consumer Price Index (CPI) and the rates on one-year Treasury Bonds as detailed in Exhibit B. The CPI utilized was obtained from the Economic Report of the President, 2016⁷ year-to-year analysis. For consistency, we analyzed the 1-year Treasury Bond rates obtained in years to estimate the annual real rate of interest earned on an annual basis over a 30-year period, 1983 to 2013. The difference between the CPI and the U.S. Treasury Bond yield was averaged to estimate the annual real rate of interest at 1.87%. This rate is the discount rate utilized to estimate the present value of future savings.

We have attempted to remove the impacts of inflation on our projection of future earnings, savings and fringe benefits. We believe forecasts of future inflation are too difficult to estimate and have, therefore, not used them. To compensate for this, it was necessary to focus on both (1) real wage increases and (2) an appropriate market interest rate reflecting the real return on investment.

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Inflation has been kept at zero for the life and work life expectancy periods.

Inheritance

Based on conversations with Michael Zubrod's parents, it is our understanding that Michael and his two siblings would have inherited their parents' estate. The estate is valued at \$1.25 million dollars (100 acres of farmland @ \$6,500 per acre plus \$600,000 in other assets) to be divided between the three children. We have assumed Michael Zubrod would have eventually received his 1/3rd interest in the estate valued at **\$400,000**.

Conclusion

As detailed in Exhibit C, we have estimated a wrongful death damage of approximately **\$834,694** based on varying assumptions. To this calculation we then added the value of Mr. Zubrod's lost inheritance valued at **\$400,000**. The totally economic loss suffered as a result of the death of Michael Zubrod is **\$1,234,694**.

Major assumptions that have not been included in the calculations, which we believe to merit some further discussion, are as follows:

Post Retirement: Michael Zubrod would have survived during retirement on investment income from savings and on benefits obtained from Social Security and potential future farming income. An assumption was made that he would not need to invade the principal balance of his savings accumulated over time, nor would he consume less than each year's cash flow. To the extent that it would have been necessary to reduce or use savings in retirement, it would serve to lower the conclusions. To the extent he would not consume all Social Security benefits and would have saved some of the cash flow from return on savings/investments, it would serve to increase the conclusion.

Career/Family: The assumption was made, that Michael Zubrod would have continue to secure employment at median compensation levels. In addition, he would have worked continuously throughout his career. Any delay in obtaining employment or breaks in employment would serve to lower the conclusions. To the extent he married and had children, future realized earnings and savings could be lower or higher.

- IV. **Expert Experience.** Brian Crotty is a senior member of the American Society of Appraisers (ASA) and the Director of Business Valuations at HDH Advisors, LLC.

We have analyzed economic damages, business valuations, accounting and financial issues in a variety of tax and business dispute matters including: lost profits and patent infringement, breach of contract, product liability, dissenter's rights and other economic damage issues.

Our compensation for this project is based on hourly rates. We were contracted to examine the case and prepare testimony, prior to any deposition or court testimony (which were contracted at additional hours), at the rate of \$225 an hour.

Brian Crotty's curriculum vitae is included in Attachment 1.

Respectfully submitted,

HDH Advisors, LLC

A handwritten signature in black ink, appearing to read "Brian Crotty", with a stylized flourish at the end.

Brian Crotty
Director, Business Valuations/Litigation Support Services